

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently amended): A virtual management system for configuring a data center having a plurality of geographically distributed facilities that provide network applications and services to a plurality of different company subscribers, the virtual management system ~~for a data center~~, comprising:

 a network device having a user interface that presents an administrative management hierarchy of objects, wherein the objects include a set of facility objects that represent the geographically distributed facilities of the data center, and wherein the objects further include a set of subscriber objects that represent the different company subscribers receiving the applications and services from the different facilities, and wherein the objects further include device objects that represent ~~components~~ physical devices located at each of the geographically distributed facilities of a network data center that provide the applications and the services to the different company subscribers; and

 a configuration manager implementing changes to the objects in the administrative management hierarchy responsive to configuration input from an administrator via the user interface.

Claim 2 (Previously Presented): The virtual management system of claim 1 wherein said user interface comprises a graphical user interface.

Claim 3 (Previously Presented): The virtual management system of claim 1 wherein said user interface comprises a command line interface.

Claim 4 (Previously Presented): The virtual management system of claim 2 wherein said user interface is provided by a host computer coupled to the configuration manager by a network.

Claim 5 (Canceled).

Claim 6 (Original): The virtual management system of claim 4 wherein the network includes a wide area network.

Claim 7 (Original): The virtual management system of claim 4 wherein the network includes the Internet.

Claim 8 (Original): The virtual management system of claim 1 wherein the management hierarchy includes a topology hierarchy of parent and children objects.

Claim 9 (Currently Amended): The virtual management system of claim 1 wherein a facility object in the set of facility objects serves as a root of the administrative management hierarchy presented by the user interface, and the facility object includes children objects representing the company subscribers, log servers that record events within the data center, devices, and services of the data center.

Claim 10 (Currently Amended): The virtual management system of claim 1 wherein a subscriber object in the set of subscriber objects serves as a root of the administrative management hierarchy presented by the user interface, and the subscriber object includes children objects that represent services provided by the data center.

Claim 11 (Currently Amended): The virtual management system of claim 1 wherein the user interface presents the administrative management hierarchy organized by at least one services object, and the services object is a parent object having children objects that represent the company subscribers, the geographically distributed facilities and the physical devices of the data center.

Claim 12 (Currently Amended): The virtual management system of claim 1 wherein the user interface presents the administrative management hierarchy organized by at least one devices object in the set of device objects, and the devices object is a parent object having children objects representing the company subscribers, services and the geographically distributed facilities of the data center.

Claim 13 (Previously Presented): The virtual management system of claim 1 wherein the user interface is accessible from outside of the data center.

Claim 14 (Previously Presented): The virtual management system of claim 1 wherein the user interface is accessible by a subscriber.

Claim 15 (Currently Amended): The virtual management system of claim 14 wherein the company subscriber can configure service objects.

Claim 16 (Previously Presented): The virtual management system of claim 15 wherein said services objects include a subscriber virtual private network.

Claim 17 (Previously Presented): The virtual management system of claim 15 wherein said service objects include a router.

Claim 18 (Previously Presented): The virtual management system of claim 15 wherein said service objects include a subscriber firewall.

Claim 19 (Previously Presented): The virtual management system of claim 15 wherein said service objects include a load balancing application that load balances services across the devices of the data center.

Claim 20 (Previously Presented): The virtual management system of claim 15 wherein said service objects include a web cache.

Claim 21 (Previously Presented): The virtual management system of claim 15 wherein said service objects include a secure sockets layer accelerator service.

Claim 22 (Original): The virtual management system of claim 1 wherein the configuration manager provides real time network services status to administrative interface.

Claim 23 (Original): The virtual management system of claim 1 wherein the configuration manager comprises a server and an agent in a service device.

Claim 24 (Original): The virtual management system of claim 23 wherein the server and the agent are coupled via a network.

Claim 25 (Currently Amended): The virtual management system of claim 24 ~~23~~ wherein the network is a wide area network.

Claim 26 (Previously Presented): The virtual management system of claim 24 wherein the server and the agent communicate via HTTP get and post operations.

Claim 27 (Previously Presented): The virtual management system of claim 1 wherein access to each of said objects via said user interface is governed by the administrative management hierarchy.

Claim 28 (Currently Amended): A system for managing a plurality of networking services provided by devices coupled to a network in a data center having a plurality of geographically distributed facilities that provide network applications and services to a plurality of different company subscribers, the system comprising:

- a configuration controller coupled to the devices in the data center;
- a service management interface for the controller enabling device configuration based on a service object representing one or more of the services;

- a subscriber management interface for the controller enabling device configuration based on a subscriber object representing the different company subscribers receiving the applications and the services from the different facilities ~~a subscriber~~ of the data center;

- a device management interface for the controller enabling device configuration based on a device object representing one or more of the devices at each of the geographically distributed facilities; and

- a facility management interface allowing the administrator to configure objects in the system based on a facility object representing one or more of the geographically distributed facilities ~~a geographic site~~ of the data center,

wherein the configuration controller controls access to the service management interface, the subscriber management interface, the device management interface and the facility management interface in accordance with a hierarchy that relates the service object, the subscriber object, the facility object and the device object.

Claim 29 (Original): The system of claim 28 wherein the service management interface presents subscriber objects, facility objects or device objects relative to the service object.

Claim 30 (Original): The system of claim 28 wherein the subscriber management interface presents services relative to the subscriber object.

Claim 31 (Original): The system of claim 28 wherein the device management interface presents facilities, services and subscribers relative to the device object.

Claim 32 (Original): The system of claim 28 wherein the facility management interface presents devices, subscribers, and services relative to the facility object.

Claim 33 (Original): The system of claim 28 wherein access to management of objects in each interface is governed by an administrative hierarchy.

Claim 34 (Original): The system of claim 28 wherein the interfaces and the controller are coupled via a wide area network.

Claim 35 (Original): The system of claim 28 wherein the interfaces are provided in a graphical user interface.

Claim 36 (Original): The system of claim 35 wherein each said interface is linked to a content service application and a service module coupled to a device agent to administer changes in the device via the device agent.

Claim 37 (Original): The system of claim 28 wherein each of said interfaces communicates with the configuration controller via the Internet.

Claim 38 (Currently Amended): An interface for management of a network data center having a plurality of geographically distributed facilities that provide network applications and services to a plurality of different company subscribers, the interface comprising:

a graphical user interface presenting components of the data center as a hierarchy of objects within the interface, wherein the data center includes devices located at each of the geographically distributed facilities that provide services to ~~a set of~~ the company subscribers;

service applications coupled to the graphical user interface objects, the applications controlling configuration of network objects responsive to the user interface; and

a network manager interacting with the devices in the data center to implement changes provided by the service applications.

Claim 39 (Currently Amended): The interface of claim 38 wherein the objects include a subscriber object representing a company subscriber to the data center.

Claim 40 (Previously Presented): The interface of claim 38 wherein the objects include a device object representing a device within the data center.

Claim 41 (Previously Presented): The interface of claim 38 wherein the objects include a service object representing service provided by the data center.

Claim 42 (Original): The interface of claim 41 wherein the service applications are launched by one or more service objects.

Claim 43 (Original): The interface of claim 41 wherein the service applications are hosted by the network manager.

Claim 44 (Original): The interface of claim 38 wherein the objects include a facility object.

Claim 45 (Original): The interface of claim 38 wherein the network manager comprises a network management server and a device agent.

Claim 46 (Original): The interface of claim 38 wherein the management server provides said graphical user interface to a user device.

Claim 47 (Previously Presented): The interface of claim 38 further comprising an object management interface that includes a plurality of configuration applications and configuration storage for objects coupled to the network.

Claim 48 (Original): The interface of claim 38 wherein the graphical user interface is provided in a Web browser.

Claim 49 (Original): The interface of claim 38 wherein the graphical user interface is coupled to the manager via a Wide area network.

Claim 50 (Currently Amended): A graphical network interface for a data center having a plurality of geographically distributed facilities that provide network applications and services to a plurality of different company subscribers, the interface comprising:

a plurality of object views representing a network data center, including:

a facility object view to view configuration data for the geographically distributed facilities of geographic sites associated with the data center,

a subscriber object view to view configuration data for subscribers the different company subscribers receiving the applications and services from the different facilities of to the data center,

a device object view to view configuration data for physical devices located at each of the geographically distributed facilities of ~~devices within~~ the data center, and

a log server object view to view log servers that record events within the data center,

each said view including a set of objects organized by a hierarchy relative to another of said views; and

at least one link to an object in said set of objects, allowing modification of configuration data for the object via the view.

Claim 51 (Original): The graphical network interface of claim 50 wherein said facility view includes at least a subscriber branch or a device branch or a log server branch.

Claim 52 (Original): The graphical network interface of claim 50 wherein said subscriber view includes at least a device branch, a log server branch or a facilities branch.

Claim 53 (Original): The graphical network interface of claim 50 wherein said device view includes at least a facilities view.

Claim 54 (Original): The graphical network interface of claim 50 wherein said interface is provided in a Web browser.

Claim 55 (Original): The graphical network interface of claim 50 wherein said interface is provided as machine readable code for an administrative device.